



• WIRELESS CONSULTANTS

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## ALTERNATIVE SITE ANALYSIS

When searching for a site for this AT&T search ring, the original goal was to address the coverage objective utilizing the fewest number of installations possible. The site search first attempted to identify preferred zones and land uses, as required by the Zoning Ordinance.

### *Preference Categories*

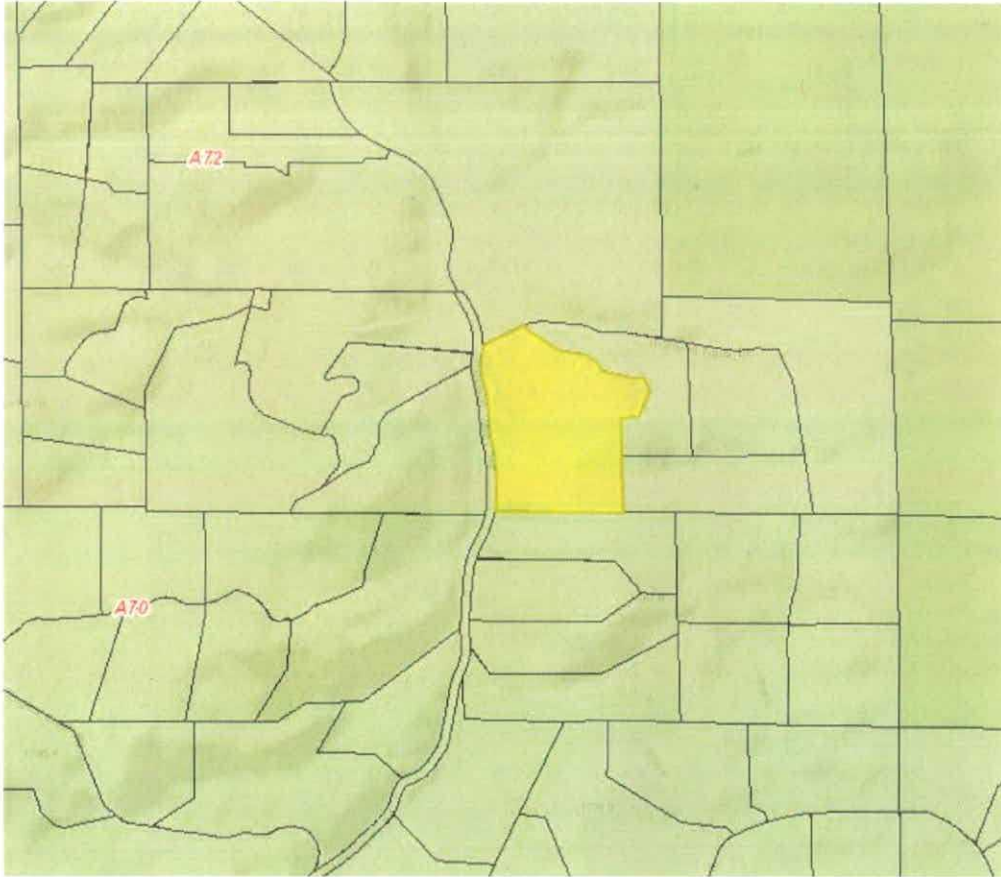
Section 6986 of the Telecommunications Ordinance (Preferred Sites) identifies the preference categories assigned to proposed zones and locations. The project site is zoned A-72 (General Agricultural), which is not a preferred zone for telecommunications facilities. The project location is on a site developed with a single-family residence and neighboring Verizon faux monopine tree surrounded many different types of live plants and trees which function to help camouflage the proposed faux tree facility. Although the faux tree design is defined as “high visibility” according to the County’s Wireless Ordinance, it is the most appropriate design for the subject site. At ~~35~~ 40 feet, the proposed faux mono-pine tree design will appear as a natural landscape element that would disappear from public view as an excepted element.

Below is a list categories that the site development team explored prior to arriving at the proposed location.

- *Preferred Zones: Industrial and Commercial*

Within and around the project search ring there are no industrial or commercial zones. Due to the topographical variations within the area and the coverage needs, this particular search ring was extremely narrow. The surrounding area is solidly agricultural/residential zoning and land use character of the project area (entirely A70, and A72 zoning). There are no industrial or commercial sites within the search ring area.

See zoning map below.



- Preferred Locations: (Close Up)





|   |   |
|---|---|
| 1 | Water Tank                              |
| 2 | Water Tanks                             |
| 3 | <i>Agricultural/Residential Parcels</i> |
| ★ | Collocation                             |

- Preferred Locations: (Zoomed Out)



|   |   |
|---|---|
| 1 | Water Tank                                      |
| 2 | Water Tanks                                     |
| 3 | Non-Residential Land Uses (School/Fire Station) |
| 4 | <i>Agricultural/Residential Parcels</i>         |
| ★ | Collocation                                     |

O *Public Right of Way / Utility Poles*

Public right-of-way solutions were sometimes relied upon with earlier generation wireless facilities when the requirements for data capacities were less and quick voice-only coverage solutions were acceptable. The current generation of AT&T broadband installation requires a minimum of 240-square-feet of base station area and the capacity to carry 12 panel antennas. No public right-of-way location was identified that could accommodate the AT&T facility required to provide adequate coverage and service level to the target area. Again, the significant topographical

constraints and the amount of right-of-way installations that would be required make utilities poles obsolete and infeasible in this area.

O Water Tanks (Numbers 1 and 2 on the aerial map above)

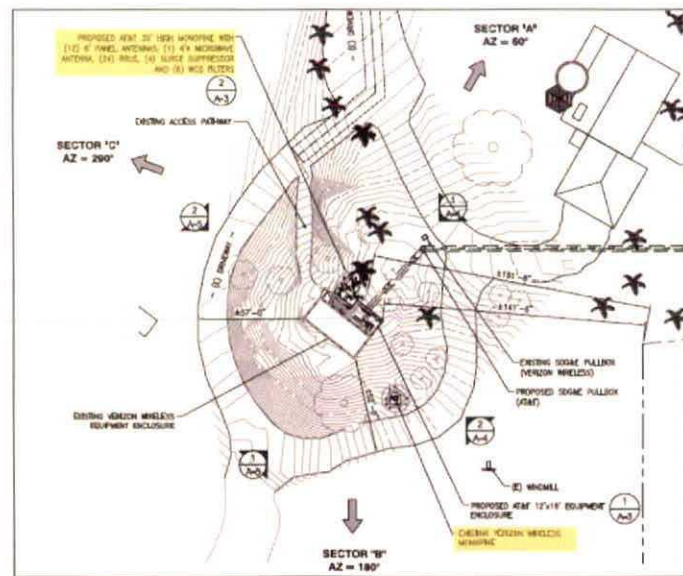
Water tank sites are preferred solutions for wireless sites since they represent a non-residential land use, frequently located within residential areas and located on high ground. There is one water tank west of the proposed site approximately 0.5 miles away (number 1 shown on the aerial map), however, it was not able to reach the same coverage objectives as the proposed site. In addition, this water tank sits at a much lower elevation than the proposed site and would not work for façade-mounted antennas.<sup>1</sup> It sits at approximately 1370 feet in elevation while the subject site sits at 1430 feet in elevation. Starting at a much higher elevation allows for the coverage objective to be reached with one site at a lower height, rather than multiple sites or taller designs. Additionally there are two water tanks at the intersection of Falcon Heights Road and Eagle Crest Road (number 2 on the aerial map above) however this site is approximately 0.7 miles away and did not meet the desired coverage objective along Highland Valley Road. The subject site is able to see both directions along Highland Valley Road, which desperately needs additional coverage. The subject site also serves residential areas along Highland Trails Drive. The water tanks at Falcon Heights Road would not be able to provide coverage along Highland Valley Road and would be too far to reach the residential areas to the east of Highland Valley Road.

☐ *Non-Residential Land Uses (Number 3 on the aerial map above)*

Opportunities for any non-residential land uses were examined. Our search for non-residential land uses included commercial sites, parks, fire stations, schools, churches, community centers and open space areas. The nearest fire station (San Pasqual Volunteer Fire Department) and school (San Pasqual Academy) were located too far outside of the search ring by Highway 78 and too close to an existing AT&T site.

O Co-location Opportunities (Star on the aerial map above)

The Verizon tree onsite was the only known collocation opportunity within the search ring and the search team did its best to explore all collocation opportunities (See below).



<sup>1</sup> Facade-mounted: Antennas affixed to the outside of a water tank.



In fact, this property was desirable because of the opportunity for collocation of multiple facilities on the same property. With the technical needs of the site, the design was restricted to collocating on the property and not on the actual existing structure. However, the equipment is designed to blend with the existing Verizon enclosure and seem like one equipment enclosure to serve both carriers.

Verizon's existing tree is 45 feet tall. Their antennas are at 40' and they have a microwave below the antennas. If AT&T were to collocate on the tree, they would need a 10' separation between Verizon's antennas and their antennas forcing AT&T to be at a maximum height of 20 feet, which is an inadequate height to be able to meet the coverage objective. The visibility of the tree would be increased significantly if AT&T was forced to collocate and the existing Verizon tree height was raised well above 55 feet so both carriers could achieve their necessary coverage objectives. The collocated, raised tree would need to be at least 70' to account for a 10 foot separation between antennas and at least a 5' tall antenna. This would cause the tree to be substantially taller than any of the surrounding trees and defeat the concealment effort. See photosim below of potential visual intrusion of raised, collocated Verizon tree.

BEFORE



AFTER



By adding an additional faux tree at a lower height, a grove-like effect of a grouping of trees is further established integrating the site seamlessly with the surrounding area.

Coverage maps showing insufficient coverage at all nearby existing telecommunication sites have been provided. The following are the collocation opportunities of existing sites in the area that were examined.

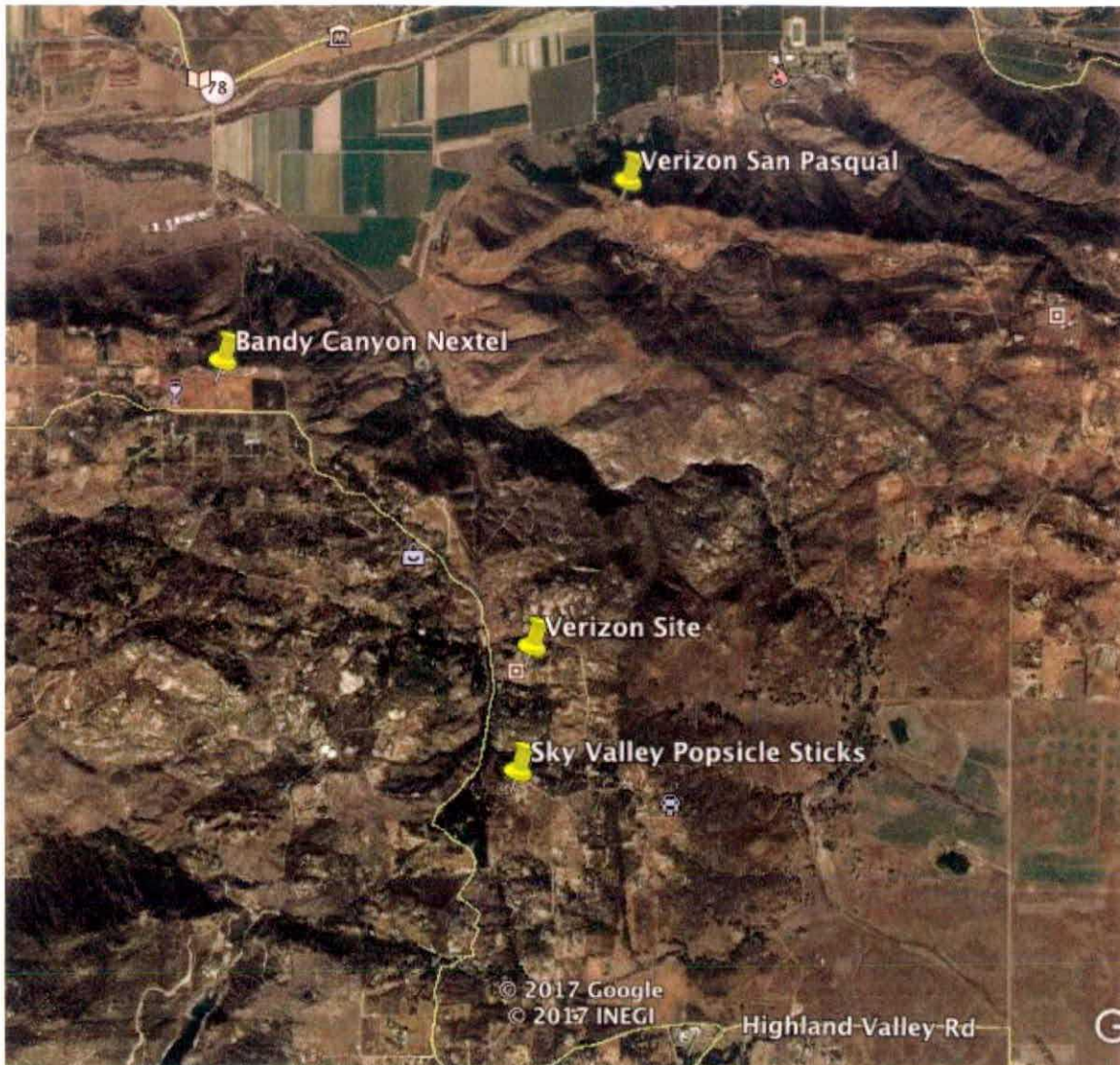
Verizon Site: 33.052817°, -116.968058°

SD06618A - Sky Valley POPSICLE STICKS: 33.046006°, -116.968930°

SAN PASQUAL / VERIZON WIRELESS ZAP: 33.078855°, -116.961810°

BANDY CANYON/NEXTEL CA8949 A: 33.068607°, -116.988630°





The Sky Valley popsicle sticks is the only other collocation opportunity within the search ring. The team reviewed this site and could not collocate on the property due to the low height of the site and the facility and also several Williamson contracts in the area.

- *Agricultural/Residential Parcels (Number 4 on the aerial map above)*  
The coverage objective was very specific for this ring because of the Federally-mandated Fixed Wireless Local Loop objectives to deliver broadband internet to the nearby residents. Due to the topography, the subject site, offered the most potential for a complete coverage answer.

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This property was thoroughly explored and an initial consultation was submitted to the County for review. The site location would require AT&T to install two faux trees to see around neighboring hillsides. Also the site has an existing Williamson Contract, which restricted wireless use on the property. This was evidenced by the initial consultation PDS2017-IC-17-020 submitted to the County of San Diego in March of 2017. AT&T explored all options to locate on this property despite the restrictive

agricultural contract, however none of the options worked as a long-term solution to meet coverage needs in the area.

Although the subject facility is located in a non-preferred zone (A72), it is designed to be in harmony with the aesthetics of the neighborhood. Furthermore, the antenna location within foliage as a screening mechanism and set back from all property lines helps the AT&T facility blend with the surrounding community character and appear as a natural element for views up the hillside.

#### *Public Benefit*

The serious lack of coverage in and around the project area has significant public safety considerations. The majority of 911 calls are now placed by wireless telephone, and many of the emergency responders now rely upon the wireless networks to a large degree for their communications. The proposed wireless facility would be E-911 compliant, meaning that emergency calls placed from the wireless phones of other carriers would connect through the proposed AT&T site. In such hilly areas, regular radio communications may not be reliable, but the cellular networks provide secure communications for areas having network coverage. Also, the wireless systems have the ability to locate lost, injured or stranded persons with the GPS aspect of the cellular networks. These rural communities of the County are vulnerable to isolation in the event of wildfires, earthquakes or other public emergencies if regular landline communications become severed. The installation of the proposed AT&T facility would greatly enhance personal, business and emergency communications for this rural community San Diego County.